

The opinion in support of the decision being entered today was **not** written  
for publication and is **not** binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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**Ex parte** STEVEN R. HOLLASCH

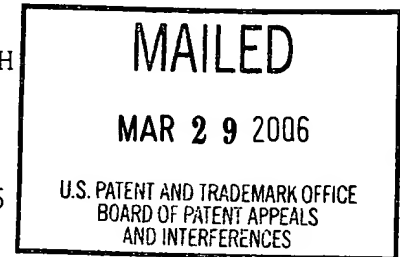
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Appeal No. 2006-0540  
Application No. 09/451,256

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ON BRIEF

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Before HAIRSTON, DIXON, and BARRY, **Administrative Patent Judges.**  
DIXON, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is a decision on appeal from the examiner's final  
rejection of claims 1-56, which are all of the claims pending in  
this application.

We REVERSE.

### **BACKGROUND**

Appellant's invention relates to a computer graphics methods and apparatus for ray intersection. A copy of the representative claim 1 under appeal is set forth below.

1. In a computer graphic processing system in which a ray is cast toward an object represented by a collection of pre-determined shapes each characterized by characteristic data, a method for determining which of the shapes are intersected by the ray, the method comprising:

defining a reference object relative to the represented object;

determining the positions of the shapes relative to the reference object using the characteristic data; and

determining, on the basis of the positions of the shapes relative to the reference object, those shapes that have no chance of intersecting the ray, and those remaining shapes that may intersect the ray.

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Yamrom	6,249,287	Jun. 19, 2001
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Claims 23 and 34 stand rejected under 35 U.S.C. § 112, first paragraph as based on a disclosure which is not enabling. Claims 1-22, 24-33, and 35-56 stand rejected as being anticipated by Yamrom.

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Rather than reiterate the conflicting viewpoints advanced by the examiner and appellant regarding the above-noted rejections, we make reference to the answer (mailed Jun. 9, 2005) for the examiner's reasoning in support of the rejections, and to the brief (filed Dec. 16, 2004) and reply brief (filed Aug. 8, 2005) for appellant's arguments thereagainst.

#### **OPINION**

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art reference, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we make the determinations which follow.

#### **35 U.S.C. § 112, FIRST PARAGRAPH**

We do not sustain the rejection of claims 23 and 34 under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and/or use the invention, i.e., failing to provide an enabling disclosure.

The test for enablement is whether one skilled in the art could make and use the claimed invention from the disclosure coupled with information known in the art without undue experimentation. **See United States v. Teletronics, Inc.**, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988), **cert.**

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**denied**, 490 U.S. 1046 1954 (1989); **In re Stephens**, 529 F.2d 1343, 1345, 188 USPQ 659, 661 (CCPA 1976).

Thus, the dispositive issue is whether the appellant's disclosure, considering the level of ordinary skill in the art as of the date of the appellant's application, would have enabled a person of such skill to make and use the appellant's invention without undue experimentation. The threshold step in resolving this issue is to determine whether the examiner has met his burden of proof by advancing acceptable reasoning inconsistent with enablement. This the examiner has not done. While the examiner has pointed out that the appellant's disclosure may vary slightly from the manner or language in the claims, it is our opinion that this alone is not a sufficient basis, in this case, to meet his burden of proof. We find that appellant has shown that there is disclosure and examples and a discussion of the claim limitation in the specification. (Brief at pages 53-58.) Appellant has argued that the examiner has not identified any of the factors in determining whether the disclosure would require undue experimentation. (Brief at pages 56-57.) Thus, we conclude that appellant's disclosure would have enabled a person of ordinary skill to make and use the appellant's invention without undue experimentation.

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**35 U.S.C. § 102**

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. **Verdegaal Bros. Inc. v. Union Oil Co.**, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), **cert. denied**, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in **Kalman v. Kimberly-Clark Corp.**, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), **cert. denied**, 465 U.S. 1026 (1984), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it." While all elements of the claimed invention must appear in a single reference, additional references may be used to interpret the anticipating reference and to shed light on its meaning, particularly to those skilled in the art at the relevant time. **See Studiengesellschaft Kohle v. Dart Indus., Inc.**, 726 F.2d 724, 726-727, 220 USPQ 841, 842-843 (Fed. Cir. 1984).

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We initially note that the examiner's statement of the rejection is replete with the examiner's discrete interpretations of individual terms in the claimed invention. While this claim interpretation may be necessary for determining the metes and bounds of the claim, we find that the examiner has gone too far in the dissection of the claim language to effectively look at the claim terminology in a vacuum separate from appellant's specification. We find that the examiner's interpretation of the claim language loses the context of the claim limitations with respect to the disclosure. (Answer at pages 6-7.) Appellant clearly identifies that the problems and solutions thereof that appellant is concerned with in the claimed and disclosed invention are different than those addressed by Yamrom. (Brief at pages 12-20.) The examiner maintains that figures 3 and 5 of Yamrom and steps 14 through 22 of the method process all the points which teach the limitation "determining, on the basis of the positions of the shapes relative to the reference object, those shapes that have no chance of intersecting the ray, and those remaining shapes that

may intersect the ray." (Answer at page 7.) Appellant argues that Yamrom does not disclose "determining, on the basis of the positions of the shapes relative to the reference object, those shapes that have no chance of intersecting the ray, and those remaining shapes that may intersect the ray." (Brief at page 16.) We agree with appellant and find that the examiner's reliance upon the holes in the shape of Yamrom would not be a determination of those shapes that have no chance of intersecting the ray and those shapes that may intersect the ray as recited in independent claim 1. We find that the holes are not predetermined shapes which are being processed as recited in independent claim 1. Furthermore, we do not find that Yamrom teaches the reduction of the number of shapes which have to be processed which is the problem of processing reduction which appellant seeks to solve. Appellant argues at page 18 of the Brief that there is no analysis or concern for shapes that have no chance of intersecting the ray, and those remaining shapes that may intersect the ray. Here, this is a reduction of the number of shapes that need to be processed to determine ray intersection.

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The examiner has not identified any such teaching, and we find no such teaching in Yamrom which would have made it desirable have a determination of those shapes with no chance of intersecting the ray and those shapes that may intersect the ray. Therefore, we find no express or implied teachings which would have taught the invention as recited in independent claim 1. Therefore, we cannot agree with the examiner that Yamrom teaches every limitation and anticipates independent claim 1. While independent claims 16, 24-27, 31-33, 40, 43, 48, and 50 have slightly different claim limitations, each still ascertains position of shapes, polygons, straddle the reference object, or determine position relative to the plane. As discussed above, we similarly find that Yamrom does not teach these similar limitations, and we cannot sustain the rejection of these independent claims also.



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## CONCLUSION

To summarize, the decision of the examiner to reject claims 23 and 34 under 35 U.S.C. § 112, first paragraph is REVERSED, and the decision of the examiner to reject claims 1-22, 24-33, and 35-56 under 35 U.S.C. § 103 is REVERSED.

**REVERSED**

KENNETH W. HAIRSTON  
Administrative Patent Judge

JOSEPH L. DIXON  
Administrative Patent Judge

LANCE LEONARD BARRY  
Administrative Patent Judge

BOARD OF PATENT  
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